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XXVII.—*On a second Collection of Birds made in the Island of Sumatra by Mr. H. O. Forbes.* By FRANCIS NICHOLSON, F.Z.S.

(Plate X.)

MR. H. O. FORBES has been collecting in Central Sumatra, and has sent to Mr. Janson a very interesting collection of birds, an enumeration of which will be found below. I have received a letter from Mr. Forbes respecting my previous communications to 'The Ibis' on the specimens obtained by him in Java and Sumatra. He writes as follows:—

“I hope you have found some specimens of interest in my collections from Sumatra—a finer island than Java, in my estimation. I am greatly vexed that my Mount-Dempo birds are so few; but I had the misfortune to lose my hunter and to have my extra supplies of ammunition lost. I noted some very interesting birds at 8000 and 9000 feet, which I could not obtain; but the deep ravines which cut up its sides make it a very difficult mountain to work over.

“I wish to add a few notes to your list of birds collected

by myself, and a few corrections which imperfect annotations on the labels have caused."

Page. *Java List* (Ibis, 1881, p. 139).

140. no. 2 (H. O. F. no. 75). Write Candar Cassicir with a *K*, *i. e.* "Kandar" &c.
- „ no. 3 (H. O. F. no. 157). Read "elevation 2200 feet above the sea." My labels were many of them written before I had taken the height of the Estate House at Kosala.
- „ no. 4 (H. O. F. no. 162). Height 2300 feet above the sea.
141. no. 7 (H. O. F. no. 49). Before "shot on cocoanut-tree" insert "Batavia."
142. no. 13 (H. O. F. no. 169). Elevation 2300 feet above the sea. *Hooroo Madang* is in my herbarium, now in the British Museum (no. 509). Hooroo sorts are species of *Laurineæ*. No. 227 *a*. This label should have been on 227 *b*, and *vice versâ* (see *Buchanga cineracea*, p. 144). 227 *a* = *B. cineracea* (Sellan Gunting); 227 *b* = *Megalæma armillaris* (Boroboi).
(H. O. F. no. 193). 2450 feet above the sea.
- „ no. 14 (H. O. F. no. 163). 2300 feet above the sea.
143. no. 17 (H. O. F. no. 16). 700 feet above the sea.
- „ no. 18 (H. O. F. no. 179). "At foot of Mt. Batoo," add "Kosala, Bantam."
(H. O. F. no. 176). "Sept. 13" should be "June 13." This specimen had the feathers at the base of the bill loaded with pollen.
144. no. 23 (H. O. F. no. 102). For "Sella Guntung" read "Sellan Gunting."
(H. O. F. no. 227 *b*). This should be 227 *a* (see p. 142. no. 227 *a* of *Megalæma armillaris*).
- „ no. 25 (H. O. F. no. 178). For "Boorung Moortjang" read "Boorung Moontjang."
- „ no. 26 (H. O. F. no. 203). Elevation above sea 2250 feet.
145. no. 27 (H. O. F. no. 137). Add "Dark brown irides."
(H. O. F. no. 52). Should be 152.

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145. no. 28 (H. O. F. no. 194). 2950 feet above sea.
 „ (H. O. F. no. 230). After “2800 feet” read
 “above sea.” Add native name, “Sellan Gunting.”
 „ no. 29 (H. O. F. no. 209). 2350 feet above sea.
 „ no. 31 (H. O. F. no. 148). After “Tjipanas” add
 “village.”
 (H. O. F. no. 204). 2250 feet above sea.
 146. no. 32 (H. O. F. no. 173). 2200 feet above sea.
 (H. O. F. no. 174). 2400 feet above sea.
 (H. O. F. no. 229). 2000 feet above sea.
 „ no. 34 (H. O. F. no. 226). Add “above sea.”
 (H. O. F. no. 202). 2400 feet above sea.
 „ no. 36 (H. O. F. no. 184). 4000 feet above sea.
 147. no. 39 (H. O. F. no. 166). 2280 feet above sea.
 „ no. 40 (H. O. F. no. 213). For “Kibjil” read “Kitjil.”
 „ no. 41 (H. O. F. no. 147). Read “about 800 feet above
 Tjipanas village on Goonoong Gobas.”
 (H. O. F. no. 192). For “Korsala” read “Ko-
 sala.”
 (H. O. F. nos. 206, 207). 2250 feet above sea.
 For “Seram” read “Seran.”
 149. no. 49 (H. O. F. no. 180). For “Gooming” read
 “Goonnoong,” at 3300 feet above sea. This bird
 (*Pomatorhinus montanus*) is either polyandrous or
 polygamous. I have not my journal by me at this
 moment, but in a letter to Mr. Sclater about four
 years ago on the subject of the *Mydaus meliceps** I
 mentioned the fact, but omitted the name of the bird.
 In the nest were seven or eight young.
 „ no. 50 (H. O. F. no. 31). Add “locality Genteng,
 Lebak, Bantam.”
 „ no. 51. With regard to the eggs of this species, I find
 in my notes a mark of interrogation as to whether
 those eggs really belong to this species.
 150. no. 52 (H. O. F. no. 117). For “Ziekrak” read “Zjie-
 krak.”
 „ no. 54 (H. O. F. no. 231). 3450 feet above the sea-level.

* See P. Z. S. 1879, p. 664.

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151. no. 55 (H. O. F. no. 172). For "Katoel" read "Katoet."
- „ no. 56 (H. O. F. no. 196). 3050 feet above sea.
- „ no. 57 (H. O. F. no. 199). 2300 feet above sea.
- „ no. 59 (H. O. F. no. 132). For "Sadjura" read "Sadjira."
152. no. 61 (H. O. F. no. 208). 2200 feet above sea.
- „ no. 62 (H. O. F. no. 131). For "Sadjiren" read "Sadjira, Bantam."
- „ no. 63 (H. O. F. no. 205). 2250 feet above sea.
(H. O. F. no. 200). For "Kosa" read "Kosala."
153. no. 67 (H. O. F. no. 158). 2300 feet above sea. Add native names "Beo," "Tjioeng." It feeds most voraciously on *Carica papaya*.
- „ no. 69 (H. O. F. no. 69). For "Kalung" read "Kaleng," and for "Kalery Cumbang" read "Kalung Kumbang." Found in flocks in dense second-growth forest. Feeds also, but not so commonly as *Sturno-pastor jalla*, on the backs of buffaloes.
154. no. 72 (H. O. F. no. 4). On waste and wet lands.
- „ no. 74 (H. O. F. no. 198). After "Katchembang (small berries)" add "*Ardisia tenuiflora*."
(H. O. F. no. 183). 3335 feet above sea.
- „ no. 75 (H. O. F. no. 82). Instead of "some species of *Acacia*" read "*Emblica officinalis*."
155. no. 76 (H. O. F. no. 227). For "Kouran" read "Kourau."
- „ no. 78 (H. O. F. no. 87). For "Pooyon" read "Pouyou."
- „ no. 79 (H. O. F. no. 86). For "Ponyou" read "Pouyou."
156. no. 80 (H. O. F. no. 24). After "Direction Island" read "Cocos Keeling Islands." Other specimens in my collection had the yellowish band on the breast.

Unless otherwise stated, I have referred to my former paper on Mr. Forbes's Sumatran collections (Ibis, 1882,

p. 51) and to Count Salvadori's paper (Ann. Mus. Civic. Genov. xiv. p. 169).

I am aware that the papers which I have recently sent to 'The Ibis' are wanting in critical remarks; but it will be seen that most of the species obtained by Mr. Forbes are not rare, and hence there is not much to be said about them. I feel sure, however, that the publication of Mr. Forbes's original notes must be of value to the monographer in future.

1. *PALÆORNIS LONGICAUDA* (Bodd.); Salvad. Ucc. Born. p. 22.

No. 423 *c, d*, ♂. Village of Kaban, river Moesie, 500 feet. Irides greenish yellow; bill scarlet; legs and feet dirty green. Feeding on cocoanut-palm.

No. 426 *d*, ♂. Kaban. Testes very large. Though in the plumage of the female, it seemed to be breeding.

No. 426 *h*, ♂. Kaban, Dec. 1881. "Betet."

No. 426 *G*, ♂. Kaban. Soft parts as above, but the lower mandible brownish grey or sooty.

No. 426 *e*, ♂. Kaban. Irides greenish yellow, of a rich bronzy colour; bill scarlet; lower mandible sepia.

These last two are evidently young males.

No. 412, ♂. Near Soeroelangoen, river Rawas, Nov. 3, 1881. Soft parts as in No. 423 *c*. Frequenting very high trees in the evening in great flocks.

No. 412 *a*, ♀. Near Soeroelangoen, Nov. 3, 1881. Bill brownish black, with the lower mandible greyish yellow. Small black fruits in stomach.

2. *LORICULUS GALGULUS* (L.); Salvad. Ucc. Born. p. 26.

No. 401, ♀. Tandjong ning, 700 feet, Aug. 6, 1881. In villages on cocoanut-trees, and kept by natives in cages. Irides dark brown; bill black; legs and feet grey. "Sc-rindet."

3. *SPILORNIS BACHA* (Daud.); Sharpe, Cat. B. i. p. 290.

No. 422 *a*. Bigin Telok, river Rawas, Dec. 8, 1881. Irides golden yellow; space between eye and gape yellow; bill blue; legs and feet yellow.

4. *POLIOAETUS HUMILIS* (Müll. & Schl.); Sharpe, Cat. B. i. p. 454.

No. 413, ♀. Near Moeara Mengkoelem, river Rawas, Sumatra, Nov. 14, 1881. Irides rich straw-colour; upper mandible sooty colour, the lower one slaty blue; legs and feet pale blue. Feeds on fish.

5. *SYRNIUM MYRTHA* (Bp.); Sharpe, Cat. B. Brit. Mus. ii. p. 264, note.

No. 370, ♂. Tandjong Djate, Lake Ranau, 1700 feet. Feb. 14, 1881. Irides rich brown; bill very pale blue; legs and feet sickly white.

The wing in this specimen measures 13 inches in length, which exceeds the dimensions given by Mr. Sharpe for *S. leptogrammicum*. I have therefore placed it under the name of *S. myrtha*, which, according to Sharpe, is a larger race of *S. leptogrammicum*.

6. *ORESCIUS GOULDI*, Bp.; Cab. & Heine, Mus. Hein. Th. iv. p. 161.

No. 369, ♂; 369 a, ♀. In deep forest near Hoedjoeng (foot of Mount Besagi), 3000 feet, Feb. 14, 1881. Irides greyish brown; wattle round eye bright deep blue; gape light blue; legs and feet light blue.

7. *ANTHRACOCEROS CONVEXUS* (Temm.); Elliot, Monogr. Bucer. pl. xii.

No. 414 b. River Rawas. Iris bright straw-colour; upper mandible white, with black band on both sides of the fore part of the crest; in front of the eye and on both mandibles a black band; skin round eye pale cobalt, but behind rich white; legs and feet black.

8. *BUCEROS RHINOCEROS*, L.; Elliot, Monogr. Bucer. pl. iv.

No. 413 a, ♂. Near Moeara Mengkoelem, river Rawas, Nov. 14, 1881. Irides deep lake; bill at base of both mandibles and on base of crest black; the crest is dark lake-red, of a most brilliant hue, shading at its lower portion into orange; front of crest deep orange; upper mandible on part below crest rich lake, changing into a broad band of orange, fading into yellowish white; junction of crest and mandible

marked by a broad band of bluish green; lower mandible black at base, after which are a few bright splashes of orange, and the rest is yellowish white; legs and feet yellowish green, soles yellow. Food *Urostigma*-fruit.

According to a note of Mr. Forbes, the irides of the young bird (three months old) are greyish blue, with indications on the lower regions of the appearance of the lake colour of the adult.

No. 400, ♂. Tandjong ning, 800 feet, August 6, 1881. Soft parts as in specimen No. 413 a.

9. *RHYTIDOCEROS SUBRUFICOLLIS* (Blyth); Elliot, Monogr. Bucer. pl. xxxvi.

No. 415. Mocara Mengkoelem, river Rawas, Nov. 18, 1881. Irides rich reddish brown; bill white, but at base streaked with green; skin below throat sea-green, mottled and marked with cobalt, then a bright cobalt line, followed by a broad black band and a rich cobalt region; legs and feet black. "Koko."

This species is new to Sumatra, but having been recorded from Borneo, it was quite likely to occur in the former island also. The specimen sent by Mr. Forbes is in the black plumage of the female bird; but from the colouring of the soft parts it would seem to be a young male, as he expressly mentions an appearance of sea-green on the throat. Mr. Elliot states that one of the characters distinguishing *R. subruficollis* is the absence of the black bar on the throat. Although I cannot detect it on the skin, Mr. Forbes seems to mention it particularly in his description of the soft parts.

10. *CENTROCOCCYX EURYCERCUS* (Hay); Salvad. *t. c.* p. 188.

No. 364, ♂. In the forest by Lake Ranau, 1700 feet, Feb. 5, 1881. Irides dark red; bill black, also legs and feet.

No. 391, ♀. Batoc Pantjeh, on river Moesie, July 4, 1881; 700 feet. Irides brownish grey; bill, legs, and feet black. Feeds on insects.

11. *CENTROCOCCYX JAVANENSIS* (Dum.); Salvad. *t. c.* p. 188.

No. 425, ♀. Forest by side of river Moesie, at Kaban,

Dec. 14, 1881. Irides dark brown ; bill black ; legs and feet black.

12. RHAMPHOCOCCYX ERYTHROGNATHUS (Hartl.) ; Salvad. *t. c.* p. 186.

No. 414 *a*, ♀. Moeara Mengkoelem, Nov. 16, 1881. Irides pale orange ; bill pale sea-green ; a broad streak of lake on lower mandible (along its length), as also on angle of upper mandible ; wattle round eye bright scarlet ; legs and feet horny.

13. RHINORTHA CHLOROPHÆA (Raffl.) ; Nicholson, *t. c.* p. 54.

No. 374, ♂. Banding agong, Lake Ranau, March 6, 1881 ; 1700 feet. Irides dark brown ; skin round eye blue, with ring of green round eye itself ; bill faded green ; legs and feet blue.

14. CHRYSOPHLEGMA MYSTACALIS, Salvad. *t. c.* p. 182.

No. 361 *b, c*, ♂ ♀. In forest near Hoedjoeng, Blalauw, Jan. 29, 1881. Irides reddish brown ; eye-wattle green ; bill very pale blue ; legs and feet bluish green.

This very fine species of *Chrysophlegma* was discovered by Dr. Beccari on Mount Singalan. It is a very well characterized bird.

15. XYLOLEPES VALIDUS (Raffl.) ; Nicholson, *t. c.* p. 54.

No. 358 *i*, ♀. Forest near Hoedjoeng, Blalauw, Jan. 10, 1881 ; 3000 feet.

16. IYNGIPICUS AURITUS (Eyton) ; Hargitt, *Ibis*, 1882, p. 42.

No. 421, ♂. Side of river Rawas at Bigin Telok, Dec. 6, 1881. Irides brownish red ; upper mandible black, lower one on underside greyish white ; legs and feet sepia-green.

When flying about pecking (very often the flowers of *Eriodendron anfractuosum* and species of *Erythrina*) it utters a clear distinct whistle.

No. 426 *a*, ♀. By side of river Moesie at Kaban, Dec. 14, 1881. Irides pinkish red ; bill black ; legs and feet faded green.

Agrees with Mr. Hargitt's description of the species (*l. c.*).

17. *XANTHOLEMA HÆMACEPHALA* (P. L. S. Müll.) ; Marshall, Monogr. Capit. pl. xlii.

No. 419, ♂. Bigin Telok, river Rawas, 180 feet above sea, Dec. 1, 1881. Irides greyish brown ; edges of eyelid red ; bill black ; legs and feet light red, claws black.

An immature bird.

18. *PSILOPOGON PYROLOPHUS*, S. Müll. ; Salvad. *t. c.* p. 178.

No. 358 *d.* In the forest near Hoedjoeng, Blalauw, 3000 feet, Jan. 16, 1881. Irides rich brown ; bill pale green, with a black band across both mandibles ; legs and feet pale green.

No. 358 *c*, ♀. In forest near Hoedjoeng, Blalauw, Jan. 16, 1881.

No. 353 *c*, ♂. Hoedjoeng, Jan. 12, 1881.

19. *PELARGOPSIS FRASERI*, Sharpe ; Nicholson, *t. c.* p. 56.

No. 356 *a*, ♂. Hoedjoeng, Blalauw, 3000 feet, Jan. 14, 1881. Irides dark brown, eyelids scarlet ; bill scarlet, also legs and feet.

No. 363 *a*, ♂. Tandjong djati, Lake Ranau, 1700 feet, Feb. 5, 1881.

No. 366 *a*, ♂. Tandjong djati, Lake Ranau, 1700 feet, Feb. 6, 1881.

20. *HALCYON PILEATA* (Bodd.) ; Sharpe, Monogr. Alced. pl. 62.

No. 414, ♂. By side of river Rawas, near Napul city, 2000 feet, Nov. 16, 1881. Irides dark brown ; bill, legs, and feet scarlet.

21. *CARCINEUTES PULCHELLUS*, Horsf. ; Sharpe, Monogr. Alced. p. 96.

No. 353, ♂. Hoedjoeng, Jan. 12, 1881 ; 3000 feet. Irides grey ; bill scarlet ; legs dull yellow.

22. *CEYX RUFIDORSA*, Strickl. ; Sharpe, Monogr. Alced. p. 121.

No. 388, ♂. By the low shrubs by the Mengeu, a small stream near Goenoeng Meraksa, June 10, 1881 ; 1800 feet. Irides dark brown ; bill, legs, and feet bright scarlet.

23. *MEROPS SUMATRANA*, Raffl. ; Nicholson, *t. c.* p. 56.

No. 423 *a*, ♂. Side of river Rawas at Bigin, Telo river, Dec. 9, 1881. Irides reddish brown; bill black; legs and feet bluish sepia. Congregates in tall trees in the open, in the evening in myriads, whence a loud hum emanates, as if from a hive of bees.

24. *CISSA MINOR*, Cab.; Salvad. *t. c.* p. 229.

No. 359 L, ♀. In the forest near Hoedjoeng, 3000 feet, Jan. 8, 1881. Irides dark red; bill dark scarlet; legs and feet light scarlet.

This is a very distinct race of the Himalayan *C. chinensis*. The specimen now sent by Mr. Forbes measures as follows:—Total length 10·3 inches, culmen 1·3, wing 4·65, tarsus 1·6. These measurements are less than those of the young bird given by Mr. Sharpe in his Catalogue (iii. p. 86), and show that the female will probably turn out to be much smaller than the male.

25. *DENDROCITTA OCCIPITALIS* (Müll.); Nicholson, *t. c.* p. 58.

No. 358 *f*, ♂. Forest near Hoedjoeng, Blalauw, Jan. 16, 1881; 3000 feet. Irides dark red; bill, legs, and feet black. Fruit-eater: feeds on Kayoe Salaian (Herbarium, No. 1969). "Golang."

No. 403 *a*, ♀. Hot springs, foot of volcano of Zaba, Sept. 15, 1881; 3000 feet. Feeds on insects and fruits. Irides dark brown.

No. 383, ♀. Foot of Mount Dempo, May 13, 1881; 3500 feet. Irides reddish brown. "Paoe."

26. *PLATYSMURUS LEUCOPTERUS* (Temm.); Nicholson, *t. c.* p. 58.

No. 390 *a*, ♂. Batoe Pantjeh, on the river Moesie, 700 feet, July 4, 1881. Irides dark red; legs and feet black; bill black. Feeds on larvæ and fruits.

27. *ORIOLOUS MACULATUS*, V.; Sharpe, Cat. B. Brit. Mus. iii. p. 199.

No. 424. Village of Kaban, river Rawas. Irides rich liquid purple-lake; bill pink, but paler near the tip; legs and feet slaty blue.

28. *BUCHANGA LEUCOPHÆA*, V.; Salvad. *t. c.* p. 208.

No. 386 *a*, ♀. In village of Paoc, at foot of Mount Dempo, 3000 feet. Irides grey; bill, legs, and feet black. Frequents the villages in twos and threes, twittering just like Swallows. "Seran."

29. *DISSEMURUS PLATURUS* (V.); Nicholson, *t. c.* p. 59.

No label.

30. *CHAPTIA MALAYENSIS*, Hay; Salvad. *t. c.* p. 43.

No. 381, ♀. Mount Dempo, 3800 feet. Irides dark brown; legs, feet, and bill black.

31. *RHIPIDURA JAVANICA* (Sparrm.); Salvad. *t. c.* p. 203.

No. 420, ♂. Bigin Telok, river Rawas, Dec. 5, 1881. Irides dark brown; bill, legs, and feet black. Feeds on insects and seeds.

32. *POLIOMYIAS LUTEOLA* (T.); Sharpe, Cat. B. Brit. Mus. iv. p. 201.

No. 960, ♀. Hoedjoeng, 3000 feet, Jan. 28, 1881. Irides very dark brown; bill grey; legs and feet purplish grey.

This I believe to be the first recorded occurrence of the species in the island of Sumatra; but as it breeds in Eastern Siberia, and migrates through China to Malacca and Borneo, its appearance in Sumatra was quite to be expected.

33. *CULICICAPA CEYLONENSIS* (Swains.); Sharpe, Cat. B. Brit. Mus. iv. p. 369.

No. 380 ♂. Mount Dempo in low scrub at 3800 feet, May 9, 1881. Irides deep brown; upper mandible black, lower one pale grey or sooty grey at tip; legs and feet sooty black.

This species, like the foregoing, has not been noticed from Sumatra before, but was a likely bird to occur in the island.

34. *SIPHIA ELEGANS* (Temm.); Sharpe, Cat. B. Brit. Mus. iv. p. 447.

No. 423, ♂. In low scrub by the side of river Rawas, near Bigin Telok, Dec. 9, 1881. Irides brown; bill black; legs in front of a sepia-colour, but as if washed with pale cobalt behind, as also the feet.

This species was originally described by Temminck from Sumatra, and was obtained by the late Mr. Buxton in Lampong.

35. *PERICROCOTUS XANTHOGASTER* (Raffl.) ; Sharpe, Cat. B. Brit. Mus. iv. p. 74.

No. 388 *a*, ♂. Goenoeng Meraksa, 750 feet, on river Lintang, June 8, 1881. Iris dark brown ; bill, legs, and feet black.

No. 382 *a*, ♂ (juv.). On Mount Dempo, Pass Oemah, 3800 feet, May 9, 1881. "Boeroeng temoenengan." Soft parts as in male.

36. *LUSCINIOLA FULIGINIVENTRIS*, Hodgs. ; Seebohm, Cat. B. Brit. Mus. v. p. 129.

No. 377, ♂. In low bushes in the hollow under the crater at Mount Dempo, 9000 feet, flitting near the ground, May 1, 1881. Irides greyish brown ; bill sooty black ; legs and feet dull faded yellow.

Compared with the generality of Himalayan specimens the bird sent by Mr. Forbes is rather browner on the head, wings, and tail ; but in this respect also it is entirely matched by a Nepal specimen in the British Museum.

37. *HEMIXUS SUMATRANUS*, Wardlaw Ramsay. A. & M. N. H. (5) x. p. 431.

No. 358 *k*, ♂ ; No. 359 *a*. Near Hoedjoeng, 3000 feet, Jan. 16, 1881. Irides reddish brown ; bill black ; legs and feet greyish black. Feeds on *Rubus* sp., among other fruits.

No. 353 *a*, ♂. Soft parts as above.

No. 353 *b*, ♀. Soft parts as above.

No. 359, sex ? Soft parts as above.

This appears to be the species referred by Count Salvadori to *H. malaccensis* (Ann. Mus. Civic. Genov. xiv. p. 221), but it differs from that species in being olive-brown above, with a brown head, the throat and breast being streaked with white as in *H. malaccensis*, but the edges of the feathers are olive-brown, instead of greenish. There are other minor differences, such as the shorter bill, greener flanks, &c., in the Sumatran bird.

38. *CRINIGER GUTTURALIS* (Bp.) ; Sharpe, Cat. B. Brit. Mus. vi. p. 80.

No. 361, ♀. In forest near Hoedjoeng, Blalauw, Jan. 29, 1881 ; 3000 feet. Irides reddish brown ; bill black ; legs and feet pale purplish flesh-colour. "Pata."

39. *IOLE OLIVACEA*, Blyth ; Nicholson, *t. c.* p. 59.

No. 390, ♂. Batoe Pantjeh, on river Moesie, 700 feet, July 2, 1881. Irides grey ; upper mandible dirty black, lower one yellowish grey ; legs and feet dirty yellow : "at the flowers of *Euphorbiaceæ*."

40. *ÆGITHINA VIRIDIS* (Bp.) ; Sharpe, Cat. B. Brit. Mus. vi. p. 11.

No. 373 *a*. Banding Agong on Lake Ranau, March 3, 1881 ; 1700 feet.

41. *CHLOROPSIS CYANOPOGON* (V.) ; Sharpe, Cat. B. Brit. Mus. vi. p. 32.

No label.

42. *PYCNONOTUS PLUMOSUS*, Blyth ; Sharpe, *t. c.* p. 152.

No. 421 *a*, ♂. In low forest near Bigin Telok, river Rawas, Dec. 20, 1881. Irides greyish brown ; legs and feet flesh-colour ; bill greyish black.

A young bird.

43. *PYCNONOTUS BIMACULATUS* (Horsf.) ; Sharpe, *t. c.* p. 138.

No. 356 *b*, ♂. In forest near Hoedjoeng, Blalauw, Jan. 14, 1881 ; 3000 feet. Iris greyish brown ; bill, legs, and feet black ; eyelids orange ; spot above each nostril orange.

44. *MYIOPHONEUS DICRORHYNCHUS*, Salvad. *t. c.* p. 227.

No. 359, ♂. Hoedjoeng, 3000 feet, Jan. 16, 1881. Irides dark brown ; bill bright yellow ; legs and feet black. "Malin batoc." Feeds in the evening on worms and seeds, flitting from stone to stone, and only in the evening frequenting the village.

45. *ARRENGA MELANURA*, Salvad. *t. c.* p. 227.

No. 358 *a*, ♀. In forest near Hoedjoeng, Blalauw, Jan. 15, 1881 ; 3000 feet. Irides dark brown, with ring of pale blue ;

bill, legs, and feet black. Feeds on fruits and insects. "Malin grenting."

46. *PNOEPYGA PUSILLA*, Hodgs. ; Salvad. *t. c.* p. 226.

No. 379, ♀. Mount Dempo at 6500 feet, May 2, 1881. Irides brown ; bill black ; legs and feet faded yellow. Feeds on insects, seeds, and vegetable scraps. Flits about among low herbage and roots of trees, taking refuge in holes.

This is an interesting bird, as it is the only specimen which has reached this country from Sumatra. Count Salvadori (*l. c.*) records an example obtained by Beccari on Mount Singalan, and proposes the name *P. lepida* if it should prove distinct from the true *P. pusilla*. Although it is difficult to tell from a single example, I can see no reason for separating the Sumatran bird from *P. pusilla*.

47. *ORTHOTOMUS CUCULLATUS*, T. ; Sharpe, Ibis, 1877, p. 115.

Nos. 376, 376 *a*, ♂. Near village of Paoe, Panoemah Lands, foot of Mount Dempo, April 25, 1881. Irides brown ; legs and feet pale sooty colour or sooty grey ; bill black. Frequents low herbage from 4000 to 6500 feet.

I have asked Mr. Sharpe to compare these two Tailorbirds with Javan examples in the British Museum, and he tells me that he cannot find any difference between them. The species is new to Sumatra.

48. *ORTHOTOMUS CINERACEUS*, Blyth ; Nicholson, *t. c.* p. 62.

No. 373, ♂. Banding agong, on Lake Ranau, March 3, 1881 ; 1700 feet. Iris pale grey ; bill blue, with dark line along the culmen ; legs and feet pale blue.

No. 375, ♀. Village of Batoe Pantjeh, 700 feet, July 8, 1881. Iris reddish grey ; upper mandible sooty colour, lower pale flesh-colour ; legs and feet pale flesh-colour.

Feeding on cocoanut-palms.

49. *IANTHOCINCLA MITRATA* (S. Müll.) ; Nicholson, *t. c.* p. 61.

No. 353, ♂. Hoedjoeng, Blalauw district, Jan. 12, 1881 ; 3000 feet. Irides reddish brown ; skin below eye creamy

white, with a flush of blue; bill yellow, also the legs and feet, but the latter slightly lighter.

Nos. 359 *a*, 359 *b*. In forest near Hoedjoeng, Jan. 5 and 7, 1881.

No. 385 *a*, ♀. Paoc, foot of Mount Dempo, 3000 feet, May 14, 1811. Irides brownish red; bill, legs, and feet bright yellow.

No. 402 *a*, ♀. Ayer Angat (Hot Springs), foot of volcano of Kaba, 3000 feet, Sept. 10, 1881. Iris mahogany-red; bill, legs, and feet orange. "Boeroeng redjang."

50. *GARRULAX PALLIATUS*, S. Müll.; Nicholson, *t. c.* p. 61.

No. 358 *g*, ♀. Irides brownish red (dark mahogany-red); skin below the eye blue, with white streaks; bill, legs, and feet black. Forest near Hoedjoeng, Blalauw, 3000 feet, Jan. 16, 1881.

No. 358 *h*, ♂. Forest near Hoedjoeng, Blalauw, 3000 feet, Jan. 16, 1881.

No. 361 *a*, ♀. Hoedjoeng, Blalauw, 3000 feet, Jan. 29, 1881.

51. *GARRULAX BICOLOR*, S. Müll.; Salvad. *t. c.* p. 229.

No. 355, ♀. In forest near Hoedjoeng, Blalauw, flying in flocks of six or seven with a screaming note, Jan. 14, 1881; 3000 feet. Irides sooty brown; bill, legs, and feet black. "Wanway Oban."

No. 358 *b*, ♀. Hoedjoeng, Jan. 15, 1881. Native name as above and "Poegoe teba." Feeds on fruit and small insects.

No. 359 *c*, ♀. Hoedjoeng, in second-growth forest, January 1881.

52. *GARRULAX LUGUBRIS*, Müll.; Gray, Hand-l. B. i. p. 281. no. 4158.

No. 402, ♂. In forest on the lower reaches of the volcano of Kaba, 3000 feet. Irides dark brown; bill light red; legs and feet green. "Boeroeng Siang."

53. *HETEROPHASIA SIMILLIMA*, Salvad. *t. c.* p. 232.

No. 403, ♀. Foot of volcano of Kaba at 3000 feet, Sept. 15, 1881. Irides mahogany-red; bill, legs, and feet black. Feeds on fruits.

This species, recently described by Count Salvadori, seems to be distinct from the Himalayan *H. picaoides*, although the points of difference are but slight.

54. *SUYA ALBIGULARIS*, Hume. (Plate X. fig. 1.)

No. 385, ♀. Near the village of Paoe, at the foot of Mount Dempo, 3000 feet, May 13, 1881. Irides greenish grey; upper mandible greyish black; legs and feet pale flesh-colour; line over eye white. Flits about on low herbage, ferns, and tall grass, keeping up a constant chirp answered by its companions.

This species was discovered by Mr. Davison in Achcen, and described by Mr. Hume (*Str. F.* 1873, p. 459). The latter gentleman, however, has recently come to the conclusion that the Sumatran species is the same as the Burmese *Suya superciliaris* of Anderson. Along with Mr. Sharpe I compared the above-mentioned bird from Sumatra with a specimen of *S. superciliaris* in the British Museum, and we decided that they are not identical, as the Sumatran species has a dark ashy head, while *S. superciliaris* has a brown head. Both are probably the non-breeding plumage of some black-breasted species, but I believe that they will be found to be specifically distinct.

55. *MIXORNIS GULARIS* (Raffl.); Salvad. *t. c.* p. 223.

No. 388 *b*, ♂. At Goenoeng Meraksa, on the river Lintang, 2000 feet, June 10, 1881. Irides dark grey; upper mandible black, lower sooty blue; legs and feet greyish green. In low forest on "Na Dah" (*Erythrina*) trees.

56. *BRACHYPTERYX UMBRATILIS* (Strickl.); Salvad. *Ucc. Born.* p. 220.

Brachypteryx umbratilis, Tweedd. *Ibis*, 1877, p. 308, pl. vi. fig. 2.



J. H. Keulemans lith

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Fig. 1. SOYA ALBIGULARIS.
„ 2. BRACHYPICTUS SATURATUS

No. 422, ♂. By margin of river Rawas at Bigin Telok, Dec. 7, 1881. Irides reddish brown, of a rich colour; upper mandible sepia-brown, lower pale blue; legs and feet pale flesh-colour, with a tinge of pink.

57. *BRACHYPTERYX SATURATUS*. (Plate X. fig. 2.)

Brachypteryx saturata, Salvad. *t. c.* p. 225.

No. 386, ♂. Mount Dempo, 5000 feet. Irides brown; white line over eye; bill black; legs and feet black. Flits about on ground or on fallen logs.

58. *TIMELIA LARVATA*, Müll.; Salvad. *t. c.* p. 222.

No. 384, ♀. Foot of Mount Dempo, May 13, 1881. Irides yellowish grey; bill, legs, and feet sooty blue.

59. *TIMELIA STRIOLATA*, Müll.; Salvad. *t. c.* p. 222.

No. 387, ♀. Frequenting low scrub at Goenoeng Meraksa, on river Lintang, 800 feet, June 7, 1881. Irides creamy grey; upper mandible black, lower sooty blue; legs and feet bluish green.

60. *MALACOPTERON MAGNUM*, Eyton; Salvad. *t. c.* p. 226.

No. 409, ♂. Near Soeka Radja, river Roepit, 300 feet, Oct. 18, 1881. Irides bright brick-red; upper mandible black, lower one very pale blue; legs and feet light blue. Irides in young bird fulvous-grey.

61. *STACHYRHIS BOCAGII*, Salvad. *t. c.* p. 223.

No. 354, ♂. In forest near Hoedjoeng, Blalauw, Jan. 14, 1881; 3000 feet. Irides brown; bill sepia; lower mandible pale grey; legs and feet light yellow.

Compared with *S. chrysea* from the Himalayas, the Sumatran species is much darker and more olive-green above. It has a rather longer bill, and underneath is everywhere of a deeper yellow. Mr. Forbes's specimen is somewhat damaged, but seems sufficient to indicate that *S. bocagii* is only a deeply coloured race of *S. chrysea*.

Total length 4·2 inches, culmen 0·5, wing 2·05, tail 1·9, tarsus 0·7.

62. *HENICURUS VELATUS* (Temm.); Salvad, *t. c.* p. 234.

No. 359 *d*, ♀; 359 *e, f*, ♂. Near Hoedjoeng Blalauw,

Jan. 18, 1881. Irides pinkish blue; bill black; legs and feet sickly white. Flitting from stone to stone in forest-streams.

63. *LANIUS MAGNIROSTRIS*, Less.; Salvad. *t. c.* p. 210.

No. 426, ♀? On low scrub by the side of the river Moesie, near the village of Kaban. Irides brown; ridge of upper mandible blackish blue, the culmen very pale blue; ridge of lower mandible blackish blue, the rest very pale blue; feet and legs very pale cobalt.

64. *ÆTHOPYGA SIPARAJA* (Raffl.); Salvad. *t. c.* p. 212.

No. 392, ♂. Batoc Pantjeh village on river Moesie, July 8, 1881; 700 feet. Irides dark brown; bill, legs, and feet black. Frequenting cocoanut-trees in flocks. Stomach full of spiders and of a watery juice.

No. 420. On *Pandanus helioscopus* in the under-water forest, side of river Rawas at Bigin, Telo river, Dec. 5, 1881. Irides brown; upper mandible dark sepia, lower reddish yellow; legs and feet pinkish sepia.

65. *CINNYRIS HASSELTII*, T.; Shelley, Monogr. Nect. pl. 42. p. 127.

No. 393, ♀. Batoc Pantjeh, on river Moesie, July 8, 1881. Irides greyish brown; bill black; legs brownish sooty colour; soles of feet pale orange. Frequenting cocoanut-palms.

No. 398, ♂. Village of Tandjong ning, 700 feet, July 23, 1881. Irides brown; legs, feet, and bill black.

66. *ANTHOTHREPTES MALACCENSIS* (Scop.); Salvad. *t. c.* p. 213.

No. 426 *b*, ♂. On cocoanut-palms in village of Kaban, river Rawas, Dec. 14, 1881. Irides pinkish red; bill black; legs and feet faded blue, with a shade of green; soles pale yellow.

No. 394, ♀. On cocoanut-palms, Batoc Pantjeh, on river Moesie, July 8, 1881; 700 feet. Irides brick-red; bill black; legs greenish blue; feet and soles orange.

No. 394, ♂. Batoc Pantjeh, July 8, 1881. In stomach small insects. On cocoanut-palms.

No. 395 *a*, ♂. Batoc Pantjeh, July 9, 1881. Bill black; legs bluish green; feet and soles orange.

67. ARACHNOTHERA MODESTA (Eyton); Salvadori, *t. c.* p. 214.

No. 408, ♀. Near Sveka Radja, 300 feet, Oct. 14, 1881. Irides reddish brown; upper mandible black, lower whitish grey; legs and feet pale yellow. Feeds on insects and seeds of *Scitaminea*, and in the stomach was also a waxy substance. Flits about on the ground and feeds much on these *Scitaminea* and terrestrial flowers, and seems to be the agent of the cross fertilization.

68. ZOSTEROPS CHLORATES, Hartl. J. f. O. 1865, p. 23 (ex S. Müller, MS.).

Nos. 378; 378 *b*, ♂; 378 *a*, *c*, *d*, E, ♀. Mount Dempo, May 1, 1881. Irides pale grey; bill black; legs dirty slate-blue. Much pollen under chin. Feeding on flowers of *Encaceæ* (Herbarium, No. 2371).

Count Salvadori has already pointed out the mistake of Dr. Hartlaub in referring to the habitat of this species as Moretai Island, instead of Sumatra (Orn. Papuasias, p. 23).

69. ZOSTEROPS AURIVENTER, Hume; Nicholson, Ibis, 1881, p. 152.

No. 358 *b*. Near Paoc, foot of Mount Dempo, 3200 feet, May 15, 1881. Irides grey; bill black; legs and feet dirty slate-blue.

This is a race of *Z. palpebrosa*, which it replaces from Ta-boy, in Tenasserim, through the Malayan peninsula and the Indo-Malayan islands. It is represented in the Philippines by a deeper-coloured form, *Z. everetti*, Tweedd.

70. CALOBATES MELANOPE (Pall.); Salvad. *t. c.* p. 236.

No. 371 *d*, ♀. Tandjong Djate, Lake Ranau, 1700 feet, Feb. 15, 1881. Irides dark brown; upper mandible black, lower one light yellow, black at the tip; legs and feet flesh-colour.

No. 413 *b*, ♀. On river Rawas, 1700 feet, Nov. 14, 1881. Irides dark brown; bill black; legs and feet horn-colour.

71. *GRACULA JAVANENSIS* (Osbeck); Nicholson, *t. c.* p. 63.

No. 415 *a*. River Rawas, 1700 feet, Nov. 22, 1881. Irides dark brown; tip of bill orange, rest of it light red; legs and feet orange.

72. *MUNIA PUNCTULARIA* (L.); Salvad. *t. c.* p. 237.

No. 357. In forest near Hoedjoeng, Blalauw, Jan. 15, 1881; 3000 feet. Irides light red; upper mandible black, lower pale blue; legs and feet pale blue.

73. *MUNIA ATRICAPILLA* (V.); Salvad. Ucc. di Borneo, p. 265.

Nos. 411, ♂, 411 *a*. Moeara Roepit, Oct. 28, 1881. Irides dark brown; bill, legs, and feet pale slate-blue.

74. *CYMBORHYNCHUS MACRORHYNCHUS* (Gm.); Nicholson, *t. c.* p. 64.

Nos. 371 *b*, 371 *c*, ♂ ♀. In forest near Tandjong Djate, Lake Ranau, 1700 feet, Feb. 15, 1881. Irides metallic green of a rich colour; upper mandible deep cobalt, lower mandible with cobalt margin, but otherwise orange; legs and feet black.

Both sexes have the same colours of the soft parts, which differ a little from those given by Mr. Forbes in my former paper (*l. c.*).

75. *PITTA VENUSTA*, S. Müller; Salvad. Ucc. di Borneo, p. 241.

No. 404, ♀. Forest at foot of volcano of Kaba, 3000 feet, Sept. 16, 1881. Irides dark brown; bill black; legs and feet a beautiful shade of pale blue. Feeds on small mollusca and seeds. "Boeroeng Api."

76. *CARPOPHAGA ÆNEA* (L.); Nicholson, *t. c.* p. 65.

No. 353 *e*. Hoedjoeng, 3000 feet. Irides dark red; bill purplish pink on upper surface of upper mandible, tip of upper mandible with lower mandible pale blue; legs and feet purplish pink.

No. 371 *a*, ♂. Tandjong Djate in forest near Lake Ranau, 1700 feet, Feb. 16, 1881. Rich brown irides; bill pink; legs pink. "Pergum."

77. SPHENOCERCUS OXYURUS (Reinw.); Salvad. *t. c.* p. 243.

No. 371, ♂. Tandjong Djate, Lake Ranau, 1700 feet. Irides cobalt-blue, with external ring of pink; skin round the eye bright green; upper mandible cobalt-blue, tip bright green; legs bright scarlet.

78. GALLUS FERRUGINEUS (Gm.); Salvad. *t. c.* p. 251.

No. 364 *b, c*, ♂ ♀. Tandjong Djate, near Lake Ranau, 1700 feet, Feb. 5, 1881.

79. POLYPECTRON CHALCURUM, T.; Elliot, Monogr. Phasian. i. pl. 10.

No. 358, ♂. In forests near Hoedjoeng, Blalauw, 3000 feet, Jan. 15, 1881. Irides dark brown, but sooty colour; legs and feet faded blue. Feeds on fruits. "Loekei."

80. EXCALFACTORIA CHINENSIS (L.); Salvad. Ucc. di Borneo, p. 311.

No. 389, ♀. Goenoeng Meraksa, on the river Lintang, 1800-2000 feet, June 13, 1881. Irides brown; bill black; legs and feet yellow. "Poeyoe."

81. CALOPERDIX OCULEA (Temm.); Salvad. *t. c.* p. 252.

No. 405, ♂. In forest near hot springs at foot of volcano of Kaba, 3000 feet, Oct. 5, 1881. Irides dark brown; bill black; legs and feet pale yellow. Feeds on insects. Enormous Fabrician glands. "Poeyoe rimboe."

82. ARBOROPHILA PERSONATA (Horsf.); Gray, Hand-l. pt. ii. p. 268. no. 9703 (?).

Similis *A. personatæ* et secundariis intimis late aureo-fulvo notatis, sed dorso toto nigro transfasciato, præpectore cum pectore summo et corporis lateribus pulchre cineraceis, et hypochondriis nigro alboque late transfasciatis distinguenda. Long. tot. 8·5, culm. 0·8, alæ 5·5, caudæ 1·9, tarsi 1·55.

No. 356, ♀. In forest near Hoedjoeng, foot of Besagi Mountains, 3000 feet, Jan. 4, 1881. Irides bluish grey;

wattle round eye dark scarlet; bill black; legs and feet red. "Berkaka."

No. 406, ♀. In forest at foot of Kaba volcano, 3000 feet, Oct. 6, 1881. Irides dark brown; bill black; legs and feet red; wattle round eye scarlet; skin of neck scarlet (below feathers). Feeds on seeds.

The specimens sent by Mr. Forbes differ considerably from the type of *Arborophila personata* in the British Museum, being much more of a bluish ash-colour on the fore neck and breast, while the back is much more closely barred with black, and the flanks are much more broadly and distinctly barred with black and white. The different plumages of this species have not been thoroughly worked out; but the Sumatran bird may ultimately prove to be distinct.

83. *TRINGOIDES HYPOLEUCUS* (L.); Salvad. *t. c.* p. 252.

No. 362, ♂. Feb. 4, 1881, Tandjong Djate.

No. 366 *b*, ♀. Irides brown; legs greenish; bill black at tip, grey behind on lower mandible. Tanjong Djate on Lake Ranau, 1700 feet, Feb. 7, 1881.

No. 410, ♂. On river Roepit, near Socka menang, 500 feet, Oct. 26, 1881. Irides dark brown; upper mandible sooty colour, lower one sooty blue; legs and feet very pale blue. "Djoe-djoeat."

84. *HERODIAS INTERMEDIA* (Hasselt); Salvad. Ucc. di Born. p. 348.

No. 372, ♂. Lake Ranau, 1700 feet, Feb. 15, 1881. Irides straw-yellow; legs black; feet bright green.

85. *BUTORIDES JAVANICA* (Horsf.); Salvad. Ucc. di Born. p. 351.

No. 366, ♀. Margin of Lake Ranau, 1700 feet, Feb. 6, 1881. Irides light yellow, almost straw-colour; legs dirty green, yellow on back parts.

No. 367, ♀. Margin of Lake Ranau, 1700 feet, Feb. 10, 1881. Upper mandible black, lower greenish.

No. 415 *b*, ♂. On Rawas river, near Moeara Mengkoelem, 1800 feet, Nov. 22, 1881. Legs black, soles of the feet yellow.

86. *BUBULCUS COROMANDUS* (Bodd.); Salvad. Ucc. Born. p. 350.

Nos. 410, 410 *b*, ♀. Irides bright straw-colour; bill yellow; feet and legs black. Feeds on insects, grasshoppers, shrimps, and small fish called "sloeang," and vegetable matter. River Roepit, near Maoer, Oct. 27, 1881.

No. 365, ♀. Tandjong Djate, Lake Ranau, 1700 feet, Feb. 6, 1881. Irides light yellow; bill yellow; legs black, with a slight tinge of green on tibiæ; soles dirty green.

No. 415 *c*. Margin of river Rawas, near Mocara Mengkoelem, 1800 feet, Nov. 22, 1881. Soft parts as in No. 410.

87. *LEPTOPTILUS JAVANICUS* (Horsf.); Salvad. Ucc. di Born. p. 358.

No. 363, ♀. Djoengoe boetak, Lake Ranau, 1700 feet. Irides bluish grey; bill pale grey; legs and feet nearly blue-black.

88. *TANTALUS LACTEUS*, Temm.; Salvad. Ucc. di Born. p. 358.

No. 418, ♂. Near Bigin Telok, river Rawas, Dec. 3, 1881. Irides greyish brown; bill with yellow markings and blotches; point of the upper and the lower mandible pale white; eye-wattle grey; occiput grey.

No. 407, ♀. Oelak Tanding, Sindang, Oct. 9, 1881. Irides dark grey; legs and feet greenish grey; bill the same. Feeds on the algæ on river-stones.

89. *HYPOTENIDIA STRIATA* (Linn.); Salvad. Ucc. di Born. p. 336.

No. 368, ♂. Tandjong Djate, on Lake Ranau, Feb. 10, 1881; 1700 feet. Irides reddish grey; upper mandible sooty; under mandible purplish, reddish grey at tip; legs and feet sooty blue. "Koentik."